

Patent Claims

1. Lift installation with a drive engine (2), which drives at least one support means (12.1, 12.2) of flat belt form, which carries a lift cage (3), by way of a drive pulley (4.1), wherein the support means has, at least on a running surface facing the drive pulley (4.1), several ribs (20.1, 20.2) extending parallelly in the longitudinal direction of the support means and per rib at least two tensile carriers (22) oriented in the longitudinal direction of the support means, characterised in that a total cross-sectional area of all tensile carriers (22) amounts to at least 25% of a cross-sectional area of the support means (12.1, 12.2).
2. Lift installation according to claim 1, characterised in that the total cross-sectional area of all tensile carriers (22) amounts to 30% to 40% of the cross-sectional area of the support means (12.1, 12.2).
3. Lift installation according to claim 1 or 2, characterised in that an outer diameter of a tensile carrier amounts to at least 30% of a rib spacing (T).
4. Lift installation according to claim 1, 2 or 3, characterised in that the ribs (20.1, 20.2) have a wedge-shaped cross-section with a flank angle (β) of 60° to 120°.
5. Lift installation according to one of claims 1 to 4, characterised in that a spacing (A) between centres of adjacent tensile carriers (22) associated with a specific rib is at most 20% smaller than a spacing (B) between centres of adjacent tensile carriers (22) of adjoining ribs.
6. Lift installation according to one of claims 1 to 5, characterised in that a minimum spacing (X) between an outer contour of a tensile carrier (22) and a surface of a rib (20.1, 20.2) amounts to at most 20% of the total thickness (s) of the support means (12.1, 12.2).
7. Lift installation according to one of claims 3 to 6, characterised in that of the tensile carriers (22) associated with a rib (20.1, 20.2) a respective outer tensile carrier is arranged substantially in the region of a perpendicular projection (P) of each flank of the rib.

8. Lift installation according to one of claims 3 to 6, characterised in that of the tensile carriers (22) associated with a rib (20.1, 20.2) a respective outer tensile carrier is arranged entirely in the region of the perpendicular projection (P) of each flank of the rib.
9. Lift installation according to one of claims 1 to 8, characterised in that the tensile carriers (22) consist of steel wire cables.
10. Lift installation according to claim 9, characterised in that the steel wire cables (22) are twisted from several stands which in total contain more than 50 individual wires (23).

AMENDED CLAIMS

**[filed with the IB of WIPO on 06 May, 2006 (06.05.2005):
original claims 1-10 replaced by amended claims 1-8]**

1. Lift installation with a drive engine (2), which drives at least one support means (12.1) of flat belt form, which carries a lift cage (3), by way of a drive pulley (4.1), wherein the support means has, at least on a running surface facing the drive pulley (4.1), several ribs (20.1) of wedge-shaped cross-section which extend parallelly in the longitudinal direction of the support means and which has several tensile carriers (22) oriented in the longitudinal direction of the support means, characterised in that the tensile carriers (22) are so distributed in transverse direction of the support means (12.1) that exactly two tensile carriers (22) are associated with each of the ribs (20.1), wherein the two tensile carriers (22) are arranged symmetrically to the axis of symmetry of the respective rib (20.1).
2. Lift installation according to claim 1, characterised in that all tensile carriers (22) are so arranged in transverse direction of the support means (12.1) that in each instance at least 90% of their cross-sectional area lies within the perpendicular projection (P) of a respective inclined flank of one of the ribs (20.1).
3. Lift installation according to claim 1 or 2, characterised in that the spacings (A) between the centres of two tensile carriers (22) associated with a rib are smaller than the spacings (B) between the centres of adjacent tensile carriers (22) associated with two adjoining ribs.
4. Lift installation according to one of claims 1 to 3, characterised in that the total cross-sectional area of all tensile carriers (22) amounts to 30% to 40% of the cross-sectional area of the support means (12.1, 12.2).
5. Lift installation according to one of claims 1 or 4, characterised in that an outer diameter of a tensile carrier amounts to at least 30% of a rib spacing (T).
6. Lift installation according to one of claims 1 to 5, characterised in that the ribs (20.1, 20.2) have a wedge-shaped cross-section with a flank angle (β) of 60° to 120°.
7. Lift installation according to one of claims 1 to 6, characterised in that a minimum

spacing (X) between an outer contour of a tensile carrier (22) and a surface of a rib (20.1, 20.2) amounts to at most 20% of the total thickness (s) of the support means (12.1, 12.2).

8. Lift installation according to one of claims 1 to 7, characterised in that the tensile carriers (22) consist of steel wire cables, which are twisted from several stands in total containing more than 50 individual wires (23).